

WHAT IS CLAIMED IS:

1. An image retrieval apparatus for retrieving a desired image from a plurality of stored images, comprising:

5 storage means for storing the plurality of images and image features of each of the plurality of images in a form correlated with the images;

feature calculation means for calculating image features of a retrieval source image;

10 acquisition means for acquiring a plurality of image features regarding one image by varying, within a predetermined range, the image features that have been stored in said storage means; and

retrieval means for performing image retrieval by
15 calculating degree of similarity between each of the plurality of images and the retrieval source image based upon the image features acquired by the acquisition means and the image features calculated by the feature calculation means.

20 2. The apparatus according to claim 1, wherein said acquisition means varies a luminance component over N steps with regard to each image feature.

3. The apparatus according to claim 1, wherein said acquisition means varies a color-difference component
25 over N steps with regard to each image feature.

4. The apparatus according to claim 1, wherein said retrieval means calculates degree of similarity between each image that has been stored in said storage means and the retrieval-source image using the plurality of
5 image features acquired by said acquisition means, and adopts maximum degree of similarity as the degree of similarity between a particular image and the retrieval-source image.

10 5. The apparatus according to claim 1, wherein said acquisition means varies a luminance component of an image feature in stepless fashion.

6. The apparatus according to claim 1, wherein said acquisition means varies a color-difference component of an image feature in stepless fashion.

15 7. The apparatus according to claim 1, wherein said acquisition means has specifying means for allowing an operator to specify number of steps over which image features are varied as well as the amount of change provided by each step.

20 8. An image retrieval apparatus for retrieving a desired image from a plurality of stored images, comprising:

storage means for storing the plurality of images and image features of each of the plurality of images in
25 a form correlated with the images, wherein the image

features have been acquired for each one of tiles
obtained by dividing an image into a predetermined
number of tiles;

feature calculation means for dividing a retrieval-
5 source image into a predetermined number of tiles and
calculating image features for every tile;

acquisition means for acquiring, with regard to
each of the plurality of images that have been stored in
said storage means, new image features by varying image
10 features by an amount of change that differs for every
tile; and

retrieval means for performing image retrieval by
calculating degree of similarity between each of the
plurality of images and the retrieval source image based
15 upon the image features acquired by said acquisition
means and the image features calculated by said feature
calculation means.

9. An image retrieval method for retrieving a desired
image from storage means storing a plurality of images
20 and image features of each of the plurality of images in
a form correlated with the images, comprising:

a feature calculation step of calculating image
features of a retrieval source image;

an acquisition step of acquiring a plurality of
25 image features regarding one image by varying, within a

predetermined range, the image features that have been stored in said storage means; and

a retrieval step of performing image retrieval by calculating degree of similarity between each of the plurality of images and the retrieval source image based upon the image features acquired at said acquisition step and the image features calculated at said feature calculation step.

10. The method according to claim 9, wherein said acquisition step varies a luminance component over N steps with regard to each image feature.

11. The method according to claim 9, wherein said acquisition step varies a color-difference component over N steps with regard to each image feature.

12. The method according to claim 9, wherein said retrieval step calculates degree of similarity between each image that has been stored in said storage means and the retrieval-source image using the plurality of image features acquired by said acquisition step, and adopts maximum degree of similarity as the degree of similarity between a particular image and the retrieval-source image.

13. The method according to claim 9, wherein said acquisition step varies a luminance component of an image feature in stepless fashion.

14. The method according to claim 9, wherein said acquisition step varies a color-difference component of an image feature in stepless fashion.

5 15. The method according to claim 9, wherein said acquisition step includes a specifying step of allowing an operator to specify number of steps over which image features are varied as well as the amount of change provided by each step.

10 16. An image retrieval method for retrieving a desired image from a plurality of stored images, comprising:
a storage step of storing the plurality of images and image features of each of the plurality of images in a form correlated with the images, wherein the image features have been acquired for each one of tiles
15 obtained by dividing an image into a predetermined number of tiles;

a feature calculation step of dividing a retrieval-source image into a predetermined number of tiles and calculating image features for every tile;
20 an acquisition step of acquiring, with regard to each of the plurality of images that have been stored at said storage step, new image features by varying image features by an amount of change that differs for every tile; and

25 a retrieval step of performing image retrieval by

calculating degree of similarity between each of the plurality of images and the retrieval source image based upon the image features acquired at said acquisition step and the image features calculated at said feature calculation step.

17. A storage medium storing a control program for causing a computer to execute image retrieval processing for retrieving a desired image from storage means storing a plurality of images and image features of each of the plurality of images in a form correlated with the images, said control program comprising:

code of a feature calculation step of calculating image features of a retrieval source image;

code of an acquisition step of acquiring a plurality of image features regarding one image by varying, within a predetermined range, the image features that have been stored in said storage means; and

code of a retrieval step of performing image retrieval by calculating degree of similarity between each of the plurality of images and the retrieval source image based upon the image features acquired at said acquisition step and the image features calculated at said feature calculation step.

18. A control program for causing a computer to execute

image retrieval processing for retrieving a desired
image from storage means storing a plurality of images
and image features of each of the plurality of images in
a form correlated with the images, said control program

5 comprising:

code of a feature calculation step of calculating
image features of a retrieval source image;

code of an acquisition step of acquiring a
plurality of image features regarding one image by
10 varying, within a predetermined range, the image
features that have been stored in said storage means;
and

code of a retrieval step of performing image
retrieval by calculating degree of similarity between
15 each of the plurality of images and the retrieval source
image based upon the image features acquired at said
acquisition step and the image features calculated at
said feature calculation step.